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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,152	03/13/2001	Kazuo Hironishi	837.1965/JDH	8626

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EXAMINER

CALEY, MICHAEL H

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/804,152

Applicant(s)

HIRONISHI, KAZUO

Examiner

Michael H. Caley

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9. 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cao (U.S. Patent No. 6,396,607) in view of Aizawa (Japanese Patent Application Publication 08-288902).

Regarding claims 3, 4, and 5, Cao discloses an optical signal processing device having:

an optical demultiplexer with an input port and a plurality of output ports

(Figure 1 element 20);

an optical multiplexer having an output port and a plurality of input ports

(Figure 1 element 30);

a plurality of optical paths for connecting input ports and output ports

(Figure 1);

at least one delay adjuster on at least one of the optical paths (Figure 1 elements 24-26);

a detector for detecting the modulation-phase of at least one of the plurality of optical signals (Figure 1 element 50);

a controller for controlling the delay adjusters (Figure 1 element 40) according to the modulation-phase detected by the detector.

Cao fails to disclose the elements of the modulation-phase detector as proposed. Aizawa, however, teaches a detector having the proposed components for use as a clock regeneration device (Figures 1-4). Aizawa teaches the clock regeneration circuit as having an optical filter (element 13), a circuit for regenerating a reference clock (element 14), a tunable optical filter (element 15), a circuit for regenerating a clock and a phase comparator (elements 16 and 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the components such as proposed by Aizawa in order to construct the clock regeneration circuit. Aizawa teaches a clock regenerative device adapted to operate with the bit period of a lightwave signal data stream. One would have been motivated to use a device such as taught by Aizawa in order to realize a clock recovery circuit capable of operating efficiently at high speeds.

Regarding claims 6, 9, 10, and 13, Cao fails to disclose the elements of the modulation-phase detector as proposed. Aizawa, however, teaches a detector having the proposed components for use as a clock regeneration device (Figures 1-4). Aizawa teaches the clock regeneration circuit as having a pulse light source for generating reference pulse light (element 14), an optical filter for passing an optical signal having an arbitrary wavelength (element 15), and a gain saturation device for accepting the optical signal passed through the optical filter and the reference pulse light (element 16). Aizawa is silent on whether the circuit for controlling the delay adjuster is constructed such that the average power of light output from the saturable absorption device is increased or decreased.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the components such as proposed by Aizawa in order to construct the clock regeneration circuit. Aizawa teaches a clock regenerative device adapted to operate with the bit period of a lightwave signal data stream. One would have been motivated to use a device such as taught by Aizawa in order to realize a clock recovery circuit capable of operating efficiently at high speeds. Furthermore, it would have been an engineering expediency to construct the circuit such that the average power to the saturable absorption device is increased or decreased. One would have been motivated to adjust the circuit to increase or decrease the average power based on the accuracy of the system in either mode with regard to the particular optical network.

Regarding claims 7 and 11, it would have been inherent that the reference pulse light have the proposed clock frequency.

Regarding claims 8 and 12, it would have been inherent that the signal processing device have the proposed means for detecting the distribution of pulse heights.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (703) 305-7913. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*mhc*

mhc

TOANTON  
PRIMARY EXAMINER